This listing of claims replaces all prior versions of claims in the Application.

Listing of Claims

Claim 1. (Currently Amended) A method of preparing a plurality of cross-linked solution polymer particles comprising the steps of: a) providing a monomer feed comprising one or more monomers, and one or more cross-linking agents; b) providing a polymerization initiator feed comprising a polymerization initiator; c) providing a reaction vessel containing one or more reaction solvents; d) heating the one or more reaction solvents to a temperature sufficient to activate the polymerization initiator; and then e) adding the initiator feed and the monomer feed to the reaction vessel at a rate such that the concentration of the one or more monomers in the one or more reaction solvents is substantially constant to provide the cross-linked solution polymer particles.

Claim 2. (Original) The method of claim 1 wherein the monomer feed and the polymerization initiator feed are combined prior to being added to the reaction vessel.

Claim 3. (Original) The method of claim 1 wherein the polymerization initiator feed further comprises one or more solvents.

Claim 4. (Original) The method of claim 1 wherein the polymerization initiator is a free radical initiator.

Claim 5. (Previously Presented) The method of claim 4 wherein the free radical initiator is selected from the group consisting of peroxyesters, dialkylperoxides, alkylhydroperoxides, persulfates, azoinitiators and redox initiators.

Claim 6. (Previously Presented) The method of claim 1 wherein at least one monomer is selected from the group consisting of (meth)acrylic acid, (meth)acrylamides, alkyl (meth)acrylates, alkenyl (meth)acrylates, aromatic (meth)acrylates, vinyl aromatic monomers, nitrogen-containing compounds, thio-analogs of nitrogen containing compounds and substituted ethylene monomers.

Claim 7. (Previously Presented) The method of claim 1 wherein the cross-linked polymer particles have a mean particle size of 0.75 to 100 nm.

Claim 8. (Withdrawn) The method of claim 1 wherein at least one monomer is selected from the group consisting of silyl containing monomers and poly(alkylene oxide) monomers.

Claim 9. (Previously Presented) The method of claim 1 wherein the one or more cross-linking agents is selected from the group consisting of trivinylbenzene, divinyltoluene, divinylpyridine, divinylnaphthalene and divinylxylene; and such as ethyleneglycol diacrylate, trimethylolpropane triacrylate, diethyleneglycol divinyl ether, trivinylcyclohexane, allyl methacrylate, ethyleneglycol dimethacrylate, diethyleneglycol dimethacrylate, propyleneglycol dimethacrylate, propyleneglycol diacrylate, trimethylolpropane trimethacrylate, divinyl benzene, glycidyl methacrylate, 2,2-dimethylpropane 1,3 diacrylate, 1,3-butylene glycol diacrylate, 1,3-butylene glycol dimethacrylate, 1,4-butanediol diacrylate, diethylene glycol diacrylate, diethylene glycol dimethacrylate, 1,6-hexanediol diacrylate, 1,6-hexanediol dimethacrylate, tripropylene glycol diacrylate, triethylene glycol dimethacrylate, tetraethylene glycol diacrylate, polyethylene glycol 200 diacrylate, tetraethylene glycol dimethacrylate, polyethylene glycol dimethacrylate, ethoxylated bisphenol A diacrylate, ethoxylated bisphenol A dimethacrylate, polyethylene glycol 600 dimethacrylate, poly(butanediol) diacrylate, pentaerythritol triacrylate, trimethylolpropane triethoxy triacrylate, glyceryl propoxy triacrylate, pentaerythritol tetraacrylate, pentaerythritol tetramethacrylate, dipentaerythritol monohydroxypentaacrylate, divinyl silane, trivinyl silane, dimethyl divinyl silane, divinyl methyl silane, methyl trivinyl silane, diphenyl divinyl silane, divinyl phenyl silane, trivinyl phenyl silane, divinyl methyl phenyl silane, tetravinyl silane, dimethyl vinyl disiloxane, poly(methyl vinyl siloxane), poly(vinyl hydro siloxane), and poly (phenyl vinyl siloxane).

Claims 10-32 (Canceled)

Claim 33. (New) A method of preparing a plurality of cross-linked solution polymer particles comprising the steps of: a) providing a monomer feed comprising one or more monomers, and one or more cross-linking agents; b) providing a polymerization initiator feed comprising a free radical polymerization initiator; c) providing a reaction vessel containing one or more reaction solvents; d) heating the one or more reaction solvents to a temperature sufficient to activate the polymerization initiator; and then e) adding the initiator feed and the monomer feed to the reaction vessel at a rate such that the concentration of the one or more monomers in

the one or more reaction solvents is substantially constant to provide the cross-linked solution polymer particles; wherein the cross-linked polymer particles have a mean particle size of 0.75 to 100 nm and a particle size polydispersity of from 1 to 15.

Claim 34. (New) The method of claim 33 wherein at least one monomer is selected from the group consisting of (meth)acrylic acid, (meth)acrylamides, alkyl (meth)acrylates, alkenyl (meth)acrylates, aromatic (meth)acrylates, vinyl aromatic monomers, nitrogen-containing compounds, thio-analogs of nitrogen containing compounds and substituted ethylene monomers.

Claim 35. (New) The method of claim 33 wherein the monomer feed and the polymerization initiator feed are combined prior to being added to the reaction vessel.